Navarretia tagetina Greene

marigold navarretia Polemoniaceae (Phlox Family)

Status: State Threatened

Rank: G5S1

General Description: Annual herb with unbranched or branched stems up to 10 inches tall. The plants are minutely hairy on the lower part of the stem, and have soft, longer hairs among the flower clusters. The leaves are up to 1 inch long, finely dissected with narrow, spine-like segments, with the terminal segments generally elongate. Flowers occur at the ends of side shoots, in dense clusters subtended by prickly bracts. The individual flowers are 1/3 to 1/2 inch long, and consist of a long, narrow tube and five short spreading lobes. Flower color is light blue to pale lavender or white.

Identification Tips: Distinguishing this taxon from other species of *Navarretia* requires the use of technical characters such as petal traces (veins on the corolla), and anther and filament characters. *N. tagetina* has: petal traces trifurcate (3 veins) below the middle of the corolla tube; corolla light blue (or pinkish to white), 3/8 to 5/8 inch long; stigmas 3 and capsules dehiscent by 3 values; filaments inserted within 1/16 inch of the corolla sinuses; filaments much larger than the anthers; terminal segments of the leaves elongate; bracts subtending the inflorescences distinctly pinnatifid rather than palmatifid.

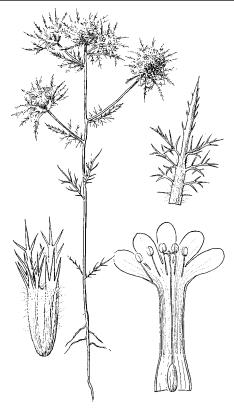
Phenology: Blooms in May and June.

Range: Klickitat County, WA in the Eastern Cascades physiographic province and south to Napa and Amador counties, California.

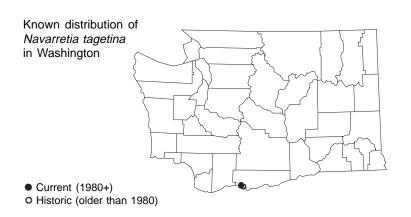
Habitat: Open, stony or rocky places at elevations of 250 to 450 feet, where there is standing water or saturated soil in early spring. Adjacent forests are composed of ponderosa pine and Douglas fir. Garry oak is also present. The non-forested areas are grass/forb dominated. Associated species include bluegrass (*Poa secunda*), harvest brodiaea (*Brodiaea coronaria*), silver hairgrass (*Aira caryophyllea*), annual hairgrass (*Deschampsia danthonioides*), lowland cudweed (*Gnaphalium palustre*), Douglas' blue-eyed-grass (*Sisyrinchium douglasii*), and clarkia (*Clarkia gracilis*). The range of the species in WA is in

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Habitat (continued): the transition zone between the forested and non-forested areas at the east end of the Columbia River Gorge. Such habitats become very dry in summer.

Ecology: As an annual inhabiting seasonally moist to wet habitats, it is presumably very dependent upon the annual pattern of precipitation. It is also likely to be subject to competition with non-native, weedy annuals.

State Status Comments: In Washington, it has only been collected at the east end of the Columbia Gorge, between Bingen and Lyle.

Inventory Needs: Stoney washes throughout Klickitat County should be inventoried. These should be areas that are seasonally wet and completely dry by summer. The "known" area also needs a more thorough inventory.

Threats and Management Concerns: The lone WA location has a history of livestock use, resulting in a significant presence of non-native, annual species. The area is currently managed for its scenic and recreational values. Development of opportunities for these values needs to be in a manner compatible with maintenance of the habitat for the species. Potential land uses include residential development, road construction, livestock grazing, and quarrying.

References:

Hitchcock, C.L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1959. Vascular Plants of the Pacific Northwest. Part 4: Ericaceae through Campanulaceae. University of Washington Press, Seattle. 510 pp.

Jolley, R. 1988. Wildflowers of the Columbia Gorge: A Comprehensive Field Guide. Oregon Historical Society Press. Portland, Oregon. 331 pp.